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ABSTRACT

This is the teacher's guide for a learning module designed to integrate environmental education into ninth- and tenth-grade social studies classes. This module and a parallel module designed for chemistry classes were pilot tested in Gwinnett County, Georgia in 1975-76. The module is divided into four parts. The first part alerts students to the serious problems that growth and development can bring to the environment and provides an ecological setting for analyzing alternative solutions. The second part provides factual information and various perspectives on population growth and the ways in which it has changed the county community. In the third part, waste collection and disposal and its relationship to land use planning, community health, and the quality of life are analyzed through a series of readings and activities. The fourth part introduces basic principles of careful land use as a means of preventing environmental decay. The teacher's guide gives overall project objectives, the module sequence and supplemental materials, and suggested short-answer review quizzes. (BB)

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Social Studies

GROWTH:

U.S. DEPARTMENT OF HEALTH
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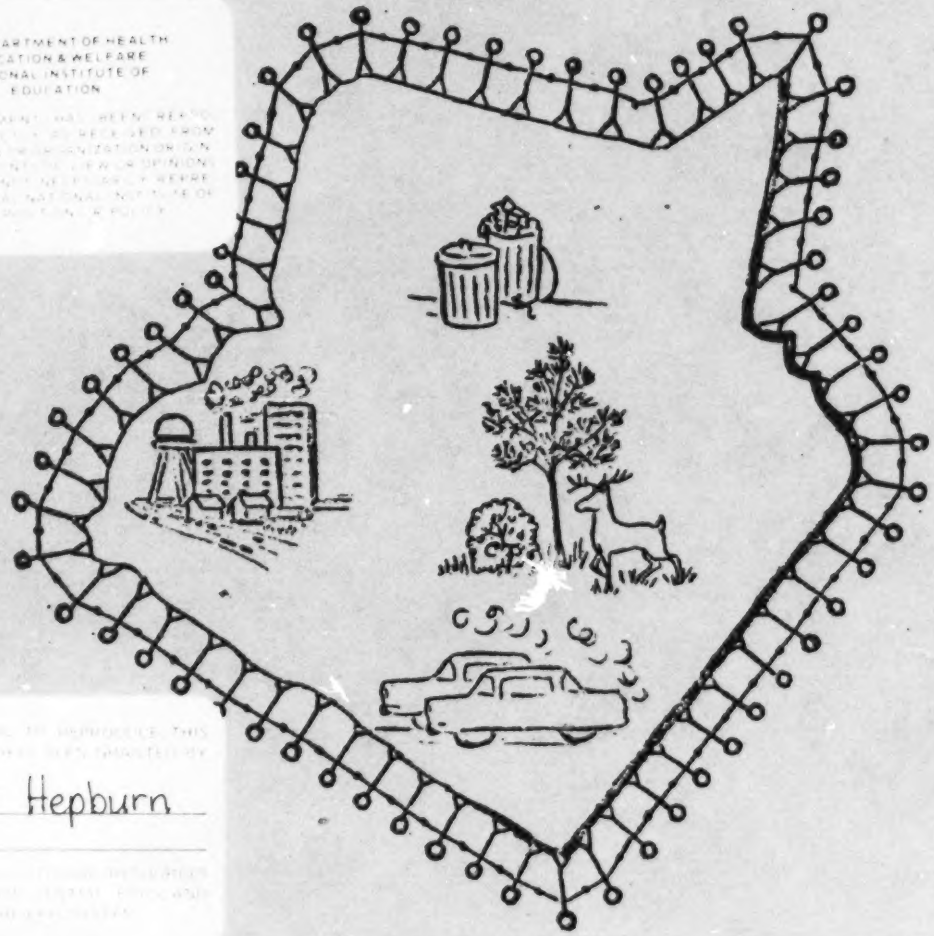
EDUCATION



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How Much Is Too Much??

TEACHER'S GUIDE

2

SE 024 443

TEACHER'S GUIDE

for

GROWTH: HOW MUCH IS TOO MUCH?

Social Studies Module

(9th-10th grade Social Studies)

Pilot Tested in Gwinnett County, Georgia, 1975-1976

Developed by ENVIRONMENTAL EDUCATION FOR THE SECONDARY SCHOOLS, a curriculum project of the College of Education of the University of Georgia, Dr. Mary A. Hepburn, Director. This project (Project No. 522AH51215) was supported by the U.S. Office of Education under the Environmental Education Act. All rights reserved.

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Environmental Education for the Secondary Schools is a curriculum project which developed these instructional materials to help high school students respond intelligently to environmental policy issues. Utilizing local issues to stimulate interdisciplinary thinking and environmental problem solving, the modular materials are coordinated for social studies and natural science classes.

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Environmental Education for the Secondary Schools, 1975-1976

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Teacher's Guide

for

Social Studies Module: Growth: How Much Is Too Much?

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Environmental Education for The Secondary Schools

Overall Objectives

Cognitive

Students will be able to:

-- define conditions of their environment in terms of interrelationships of the biotic and abiotic components

-- gather, organize and relate environmental data from science and social studies

-- relate first hand field investigation and experimentation to more abstract environmental knowledge

-- specifically delineate sources of population problems, water problems, land use problems and waste disposal problems in the county community

-- focus on public issues in selecting areas for scientific - environmental experimentation

-- utilize science knowledge in making social decisions

-- identify, examine and evaluate consequences of alternative public responses to given environmental problems and the potential trade-offs involved

-- determine channels for citizen action on specific issues and compare them

-- relate detailed knowledge of local environmental problems to environmental problems of the state and region

Affective

Students will:

-- demonstrate involvement in local environmental issues

-- demonstrate a commitment to using the knowledge and skills of science and social studies in analyzing environmental problems and determining action

-- express interest in other related problems of the state and national environment

-- demonstrate a rational, evaluative attitude toward making environmental choices

MODULES SEQUENCE - EESS

1. OPENING
   Immersion in Environmental Problems by Means of

   -- Dramatic Episode (Factual or Fictional Based on Fact)
   -- Perplexing Situation - News Reporting Style
   -- Visual series or a Visuals/Quotations Montage

2. INFORMATIONAL STAGE
   Build Foundations for Decision-Making by providing

   -- Data and Perspectives for building to summary statements or generalizations
   -- Summary statements for analysis and application to other sets of data
   -- Values "Situations"

3. UTILIZATION - OPPORTUNITY TO APPLY PREVIOUS LEARNING TO A PARTICULAR PROBLEM STUDIED IN MORE DEPTH

   -- Case Study or Detailed Report
   -- Comparative Study
   -- Multiple Perspectives

4. ACTION - EXPLORATION OF CHANNELS FOR INDIVIDUAL AND GROUP ACTION

   -- Individual Action
   -- Obtaining Information, Familiarity with Agencies of Research, Information and Service
   -- Interest Groups or Pressure Groups
   -- Publicity - Keeping Others Informed
   -- Civic Action - Using formal Political Channels to provide a public forum on the issue to bring about change and improvement

5. EVALUATION

   -- Evaluate learning outcomes
   -- Internal evaluation of modular instructional unit
   -- Estimate apparent community effects

Introduction and General Objectives for This Module

Part I

"Getting the Feeling: Environmental Consciousness" is designed to alert students to the serious problems that growth and development can bring to the environment and to provide an ecological setting for analyzing alternative solutions.

A set of future episodes dramatize the potential problems of uncontrolled growth. Then, readings and activities emphasize environmental interdependence and the ways in which man affects and is affected by the system in which he lives.

Part III

"Getting The Facts: Growth and Its Consequences" provides students with factual information and various perspectives on population growth and the ways in which it has changed the county community.

The high school is observed as a small community which reflects growth effects on the surrounding county. Population increases, crowding, needs for new facilities, transportation problems, needs for increased water, food and waste disposal services are among the similarities stressed. Readings and activities are designed to advance skills, factual knowledge and values distinctions which will be applied in the next two sections.

Part III

"Getting Into A Problem: Solid Waste Disposal" allows students to study a specific problem of rapid growth in some depth. Waste collection and disposal and its relationship to land use planning, community health and the overall quality of living are analyzed through a series of readings and activities which concern Gwinnett County and many other exploding suburbs.

Part IV

"Getting Into the Act: A Land Use Decision" introduces basic principles of careful land use as a means to preventing environmental decay. Several readings and activities (including a suggested day of study of field sites in the county) lead up to the culminating simulation, "Zone of Contention."

The simulation raises questions of land use and waste disposal alternatives and confronts students with a realistic local situation where they must decide on a specific course of action.

Suggested Teaching Sequence

Part I

Objectives

Students will:

1. Demonstrate an ecological awareness in evaluating the seriousness of local environmental problems.
2. Define environment, ecology and ecosystem giving local examples.
3. Delineate the biotic and abiotic components of the local environment.
4. Describe the interdependence exemplified in a simplified systems model of a food chain.
5. Apply the simplified systems model to predicting the effects of several hypothetical man-made changes.
6. Demonstrate a sensitivity and concern over environmental conditions of the local county community.
7. Distinguish between the values of survival and quality living.

Day 1

A. Reading pp. 4-9 and discussion of four 1986 news items. Could these events actually happen in Gwinnett County? Are there signs of such problems developing now? Go over questions on p. 9.
B. Discuss photo on p. 3. It was actually taken in Gwinnett. Is it an unfamiliar scene?
C. Consider the quotation from Milton (on a transparency -- see next page).

Day 2

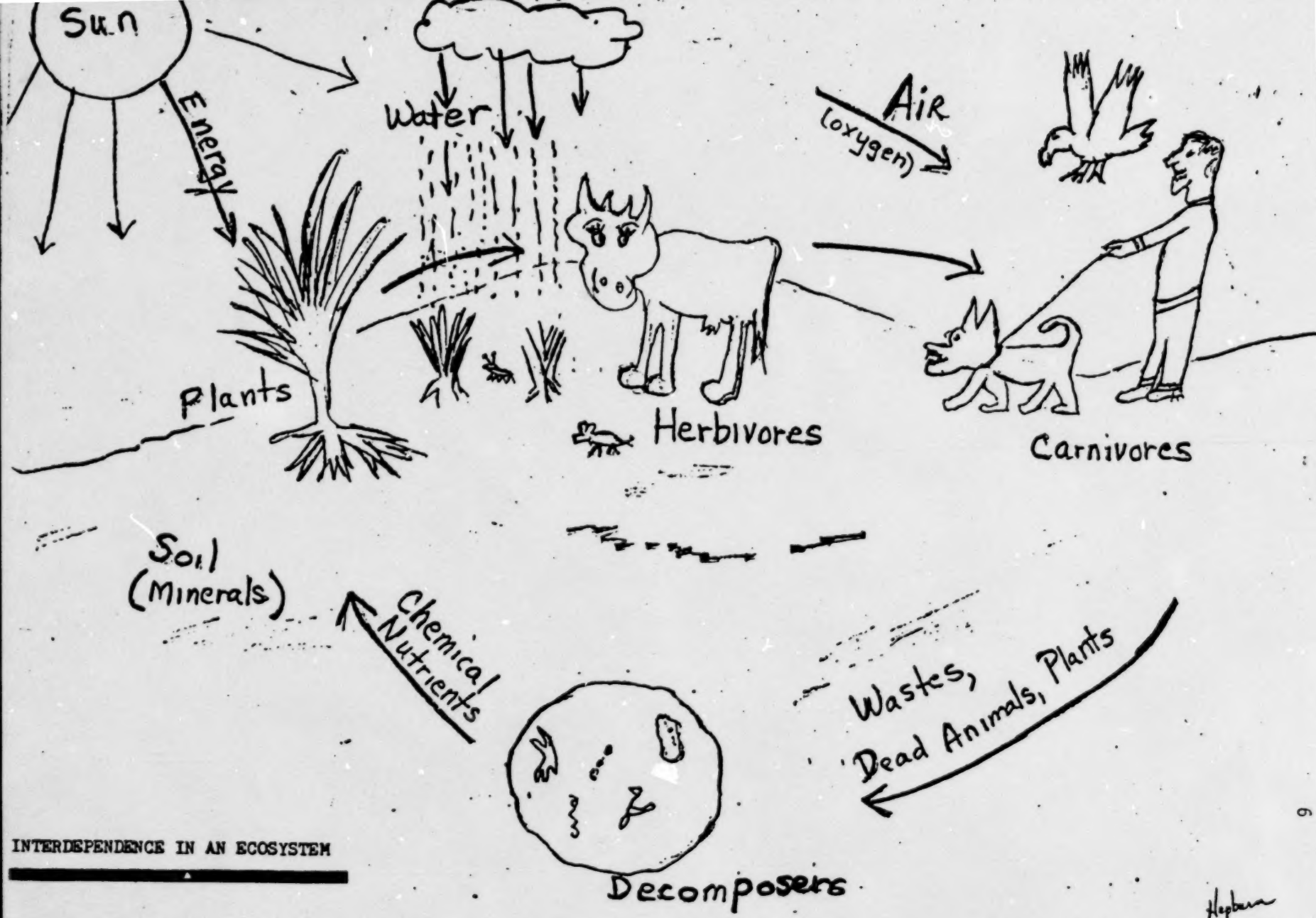
A. Question students about commonly-heard terms "ecology" "environment," "ecosystem" to learn what they already know about their meaning. Then have students read pp. 10-12. Briefly review the definitions of ecology, ecosystem and environment given on the reading pages.
B. Have students read and carry out the activity beginning on page 13.
    1) each student makes his/her own personal list of ten items desired (in 8 minutes).
    2) frequently mentioned items are listed on the board in a short class discussion (ten minutes).
    3) Divide class into two groups to talk over and come to a consensus in each group on which ten items to request (10 minutes).
    4) The class as a whole should decide on a final list of the ten items to request which will benefit everyone most.

The distinction should be made between those items which are considered essential to survival and those which are important to quality living.

ACCUSE NOT NATURE. SHE HAS DONE

HER PART. DO THOU THINE.

John Milton, PARADISE LOST



INTERDEPENDENCE IN AN ECOSYSTEM

Hepburn

Day 3

A. Go over questions on p. 16 reviewing the concepts of basic needs, for comfort and happiness, decision-making and consensus.
B. Read pp. 17-20 and use the copymaster on the next page to make a transparency and/or dittoed sheets to go over the interdependent system shown in the drawing on p. 19.
C. Have students answer the questions on p. 21 using this drawing.
D. Have students read through the lyrics of the song on page 22, and ask them to analyze the difference in the conditions described in the hills and then in the valley. (Note that the vegetation has been overused, "too many cattle feed on the grass," and through carelessness erosion has made the valley area desolate.)

Part II

Objectives

Students will:

1. Cite evidences of rapid growth in the county including housing developments, traffic jams, new schools, new shopping centers, air pollution, water pollution, increased demands for government services, crowding, erosion.
2. Examine the high school environment as an analog of the county and estimate the impact of growth based on this analogy.
3. Demonstrate in a classroom simulation proportional changes in the county's population from 1950 to 1975.
4. Calculate population growth rates in the county between 1950 and 1960, 1960 and 1970, and 1970 to 1975. Then describe in general terms the pattern of growth.
5. Specify which areas of the county have the greatest population density.
6. Describe suburban growth patterns in the U.S. drawing examples from the local county.
7. Explain how birth, death and migration affect population (with emphasis on the major role of migration in Gwinnett).
8. Briefly summarize overall world population growth patterns and compare the rate of growth to Gwinnett County.
9. Identify the multiple factors contributing to the great influx of population in Gwinnett.
10. Briefly describe the environmental impact of rapid population growth in regard to: soil and drainage problems, loss of farmlands, transportation problems, air pollution, mushrooming needs for services from local government, solid waste disposal problems.

Day 4

A. A large wall map of the county is enclosed in the teacher's guide. Place it on a wall or bulletin board for use throughout the rest of this unit of study to help students locate population centers, main transportation arteries and landfills.

B. Mark an area roughly 5 ft. by 5 ft. shaped like Gwinnett County on the floor of the classroom with masking tape or chalk.
   - Select 5 students to stand within the area. Note on the board that each student represents 6,000 people. (These students roughly represent the 1950 population of the county.)
   - Add 2 more students to show proportional growth for 1960.
   - Add 3 more for 1968.
   - Add 2 more for 1970
   - Add 2 more for 1972.
   - Add 2 more for 1975.

   (Crowding of a limited space dramatizes the growth of population, but be sure to note the limitations of this model as stated on p. 26.)

C. Discuss the growth of population in your high school in recent years. From the principal or the county office of the school system try to obtain enrollment figures for the high school for several recent years. The figures can be put on the board or distributed to students on a handout to analyze growth of the school. (This can be related to county growth on the next day.)

Day 5

A. Use pp. 27-29 to analyze population growth in the county. Page 29 shows how to compute the growth rate between two given years, and then shows how to determine average annual rate of growth.

Answers to the questions are as follows:

1) 3.47%
2) 66.1% between 1960 & 1970, or 6.6% average annual growth
3) 65.18% between 1970 & 1975 or 13.1% average annual rate of growth
4) Buford, Buford, Lawrenceville
5) Lawrenceville, Lawrenceville, Buford, Snellville
6) Snellville (Its population grew 12 times the size it was in 1960)

Day 6

A. Have students read pp. 30-32 regarding factors influencing population. Note the U.S. and world growth rates. Emphasize the great number of people that 2.2% growth adds to the world.
B. The chart on p. 35 reveals the "explosion" of world population projected to the year 2000 and deserves discussion.
C. Raise the questions of food, space and expendable resources which the people of the world must face.
   For example, Will more and more farmland be used up to provide homes and production for the increasing people?
   Will clean water become a high priced commodity?
   Will food become so scarce it will provoke wars?
   Will food become a political weapon?
   (A suggested alternative or addition to B and C is a film entitled Population Ecology , 19 minutes, black and white, available from Encyclopedia Britannica Educational Corporation, 425 Michigan Avenue, Chicago, Illinois, 60611. Rental fee $6.50. Order several weeks in advance.)
D. Examine the population density map (1970) p. 35 noting the areas of heaviest density. The larger wall map will help students determine exactly which cities are located where the dots cluster.

Day 7

A. The textbook discussion of reasons for migration to Gwinnett County on pp. 32-36 should be read over and the reasons outlined briefly on the board.
B. Assign the related activity on p. 37 to be reported and tallied the next day.
C. Look over photos on pp. 39 and 40 and raise questions: "Is our high school crowded? Are parts of the school environment afflicted by population growth? If so, what are the visible signs?" Then have students read pp. 38 and 39.
D. Students should enjoy reading and analyzing the dialogue "A Lot of Lots" provided by a copy master on the next page.

A Lot of Lots

Donnie: "I bought a 1/2 acre lot on Lake Morris."
Marie: "That's good."
D: "No, that's bad."
M: "Why do you say that?"
D: "It cost so much forone lot that I couldn't buy two."
M: "That's bad."
D: "No, that's good."
M: "Why do you say that?"
D: "The price of the lot includes paved roads and driveway, and street lighting."
M: "That's good."
D: "No, that's bad."
M: "Why do you say that?"
D: "The street lights attract bugs, and there's a light near me."
M: "That's bad."
D: "No, that's good."
M: "Why do you say that?"
D: "I like to go fishing, so I can use those bugs."
M: "That's good."
D: "No, that's bad."
M: "Why do you say that?"
D: "I spent money on a new fishing boat and outboard motor."
M: "That's bad."
D: "No, that's good."
M: "Why do you say that?"
D: "Now, I can go all around the lake."
M: "That's good."
D: "No, that's bad."
M: "Why do you say that?"
D: "Many of my friends just <u>love</u> to water ski."
M: "That's bad."
D: "No, that's good."
M: "Why do you say that?"
D: "We planned this lake property for recreation and vacation."
M: "That's good."
D: "No, that's bad."
M: "Why do you say that?"
D: "Now there are too many people doing what I have done for me to enjoy the peace and quiet of it."

Day 8

A. On the chalkboard, tally the results from the activity on p. 37. Ask students to summarize the findings (i.e., the most frequent reasons people gave for migrating to Gwinnett).
B. Very briefly review the effects of growth on the school. Then have students read pp. 41-49 describing the effects of growth on the county.
Assign these questions:
1) What is a megalopolis? Is Gwinnett County likely to become part of one?
2) What soil and drainage problems result from a rapid influx of population?
3) What is happening to the arable land in suburban areas?
4) How does the increased population of Gwinnett County contribute to photochemical smog in the air?
5) How has the county's growth affected the county's government?

Day 9

A. Go over the quotations on pp. 52-53 which were drawn from newspaper articles and interviews and have students analyze the concerns, fears, values which are expressed. Note the differing occupations and differing perspectives of these individuals. Ask students if they can offer additional or different viewpoints on the question of growth.
B. Have students read over the poem on p. 51 and answer the questions on page 50. (The assignment of a short essay or poem to express individual perceptions of "a quality life" is optional). A free loan film which might be used here is All The Difference, 20 min., color, sponsored by Eastman Kodak. The film presents a future generation which looks back with nostalgia to a past where the environment could still be protected. Quotations from Thoreau, Lowell and Wordsworth recall America's beauty. Available from Modern Talking Picture Service, 412 W. Peachtree, N.W., Atlanta, Phone (404) 524-1311.

Part III

Students will:

1. Describe sources and effects of great increases in solid waste in their county.
2. Compare "dumping" and more healthful and esthetic means of solid waste disposal.
3. Describe what happens to solid waste in recycling processes.
4. Generally describe sanitary landfill techniques (two types).
5. Compare advantages and disadvantages of solid waste disposal by inceneration, sanitary landfill and composting.
6. Evaluate alternatives for the collection and disposal of solid waste in Gwinnett County considering both benefits and costs.
7. Analyze viewpoints and personal values regarding the means of "getting rid" of waste.

Day 10

A. A good way to open this section is to bring a large plastic "surprise bag" (a garbage bag which is full of paper, empty cartons and packing material which you would usually throw away in one week's time). Dump this "surprise package" on a table at the front of the room and ask students if they can estimate how long it took how many people to "produce" this amount of paper and plastic trash. Also ask them to estimate how many garbage cans their families fill in a week's time. Generally probe their awareness of solid wastes.
B. Assign pp. 56-67 along with questions 1 through 4 on p. 78 (to be written out).

Day 11

A. Ask students to explain 1) the difference between dumping and "getting rid" of garbage and trash in a sanitary way, and 2) the disadvantages of dumping.
B. Discuss sanitary landfill methods using chart on p. 65. Also review incineration and composting as means of recycling.
C. Read news article on p. 74 and discuss this local problem. Has the situation gotten any better since December, 1975? To lead into the followup reading, ask if there are garbage collection problems in the sub-division or areas where they live. (Students may raise many of the problems discussed in the reading.)
D. "The Dacula Question" on p. 68 could be discussed on this day. (The results of the public referendum are revealed in the news story on the next page of this guide. This can be used as a copy master if you wish to hand it out). Note the differing viewpoints on land use in Dacula. Also note the interchangeable use of "dump" and "landfill" by the press!
E. Have students read pp. 67-76 and answer question 5 on p. 78.

PAGE 13 DELETED DUE TO COPYRIGHT RESTRICTIONS.

Day 12

A. Discuss question 5 on p. 78 and 6 on p. 79 using the news article reprinted there.
B. The chart on page 77 should be used to determine the various agencies of county government which help to protect the quality of the environment.
C. To review thru Part III, Gwinnett Review, a set of slides with cassette tape narration developed by EESS (Script on next page).
D. One of several free films are suggested here. (Be sure to order them several weeks in advance)
   - The Trouble With Trash - 28 min., color, survey the waste disposal problem, and describes the sanitary landfill as a solution. (Sponsored by the Caterpillar Tractor Company). Available from Modern Talking Picture Service, Inc., 412 W. Peachtree N.W., Atlanta, Phone (404) 524-1311.

   - Cycles - 13 1/2 min., color. Surveys the solid waste problem and examines the technology of recycling solid waste material. Sponsored by the Glass Container Manufacturers, the film is available from Association-Sterling Films, 866 3rd Avenue, New York, New York, 10022.

   - Wealth of the Wasteland - 27 min., color. Tells about the millions of tons of "junk" generated annually in the U.S. and specific efforts to recycle and reclaim valuable resources. Sponsored by the U. S. Bureau of Mines and available from Motion Pictures, U. S. Department of Interior, Bureau of Mines, 4800 Forbes Avenue, Pittsburgh, Pennsylvania, 15213.

Social Studies Module - 9th Grade
"Gwinnett Review"
(end of Part III)
Slide - Tape Presentation

:- slide number

1-

2-

3- Do you recognize these scenes?

4-

5- This is the Berkmar environment. The population here has grown rapidly.

6-

7- Like the rest of Gwinnett County, the population has mushroomed!

8-

9-

10- The County used to look like this -- rural, with small towns.

11-

12- There were probably more cows than people.

13- Then about 20 years ago, Gwinnett began rapid growth.

14- People moved here in great numbers.

15- More people needed more housing.

16- Acres and acres of new housing were built.

17- The land was pushed and stripped and shaped to accomodate the people.

19- 20-

18- More people required more stores and shopping centers, more businesses,

22-

21- more cars and roads, more restaurants, more churches, more schools,

23 - more of everything that people use.

25-26- 27-

24- As the population tripled and quadrupled the soil, water, plant life

28- and all surroundings were affected.

29- erosion

30- pollution

31- dumping

flooding
and many other environmental insults.
One great problem has been with solid waste.

How do we get rid of the garbage and trash that great numbers of people produce?
Illegal dumping has become a serious problem.
In some cases the illegal dumpers are caught, or traced by their garbage, then arrested and fined.
But Gwinnett needs a positive program to make garbage collection work.
Here a county franchised landfill garbage and trash are buried in the
County government also provides other kinds of leadership for keeping up the quality of life in Gwinnett.
Here, for example, the county, with help from the Soil Conservation Service of the U.S. Department of Agriculture, seeded an eroded area by a water spray technique.
The result was to change this eroded area --
To this -- giving the roadside a rich grass cover to prevent the soil from washing or blowing away.
Your county government must attempt to protect the resources and the people of Gwinnett from further environmental decay.
County officials have worked out a plan of development. It sets specific limits on the use of land.
The effects on the soil, water, air, plants and animals of any area must be considered before man develops the land.
Building Gwinnett today while planning for tomorrow we must consider both the biotic and abiotic parts of the system we live in.

Part IV

Objectives

Students will:

1. Demonstrate a general consciousness of the chain-effects of manmade changes in the environment.
2. Evaluate a set of land use planning guidelines and apply those guidelines to case situations.
3. Recognize and define the code of the zoning districts of the county and the land use generally allowed in each district.
4. Delineate political procedures for rezoning land in the county and follow these procedures in a simulation.
5. Based on observations made on a field trip, evaluate the results of several local efforts to plan for optimal land use.
6. Given a zoning controversy, decide on optimum use of a given land area considering both social need and scientific knowledge.
7. Demonstrate an understanding of the different perspectives of citizens with different interests in playing the roles of people concerned over a specific rezoning issue.
8. Develop a critical-analytical attitude toward growth and land development considering the various types of costs and various types of benefits in each case where a decision must be made.

Day 13

A. Read the quotation from Ralph Nadar on p. 82 and ask students if they see evidence of such "utter disregard" in <u>their</u> county.
B. Have students read pp. 82 - 89.
C. In the exercise on p. 90 students should apply the recommendations of the Task Force on Land use in evaluating the building of the San Antonio expressway as it is described in the short article. (The expressway project fails to abide by recommendations 2, 3, 5, 8, 9 and 10.)

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Day 14 (Optional)

A. A day for visiting sites of planned land use in the county should be planned for this stage of the module. The field visits require pre-arranging for school bus transportation and for approval by the directors of the sites to be visited. However, the time and energy spent are well worth it because first hand observation so effectively promotes learning.

Suggested sites are:

The Simmons national headquarters building north of Norcross as an example of how man can design his constructions with minimal disturbance of nature. (A tour of the grounds and building takes a few hours and should be pre-arranged with corporation officials.)

A visit to the Arnold Sanitary Landfill on Arnold Road just off Highway 29 is a fitting followup to Part III and concerns landuse planning as well. Dump trucks and bulldozers can usually be seen in full operation in the mornings or in the early afternoon. Mr. Arnold is willing to explain the fill process and answer questions.

Day 15

A. Discuss quotation and questions on p. 101. Indicate that the first steps in the direction of avoiding "despoilation" in the community are planning and zoning.

B. Show students a section of a Gwinnett county zoning map. (There is one in the textbook on p. 94. This page shows the area around Berkmar High School. The school property is zoned O-1 (Institutional). Large sections showing the area in which your school is located can be obtained from the Planning Department in the county building in Lawrenceville.)

C. Have students read pp. 92-100. Go over the zone codes and encourage general recall of their restrictions in preparation for the simulation in which they will participate during the next few class days.

D. Have each student draw a role card for the simulation randomly from a box or hat. Then assign reading of pp. 103-107 in preparation for the simulation. The role cards have only last names so that they can be played by either girls or boys. (Role cards can be made by cutting the yellow pages at the back of this guide.)

Day 16

A. Review the stages and procedures for "Zone of Contention" so that students clearly understand their parts.
B. Materials of Importance for the Simulation:
   - A zoning map of the area of the proposed landfill is included in the guide so that you can pull it out and place it on the bulletin board. (Urge students to note the location of the Pleasant Hill - Cruse Road area on the county wall map.)

   - A copy of The Soil Survey, Gwinnett County, Georgia should be available to aid certain individuals in making a decision during the simulation. A copy can be obtained from the Soil Conservation Service of the U.S. Department of Agriculture in Lawrenceville. See or phone Lloyd Harris.

   - The Zoning Resolution of Gwinnett County should be available for students to check the zoning of surrounding areas, flood plain indications, etc. It is available from the Department of Planning in the county building in Lawrenceville. Phone Ron West or others on the planning staff.
C. Hold the first meeting of the Zoning Board of Appeals as outlined for Stage I of the simulation. Limit speakers to 5-8 minutes.

Day 17

A. Individuals whose viewpoints are similar should meet as special interest groups (Stage II) to collect information, clarify their positions on the landfill issue and plan their strategy. The soil survey book , zoning code book and county maps should be useful to a number of role characters.

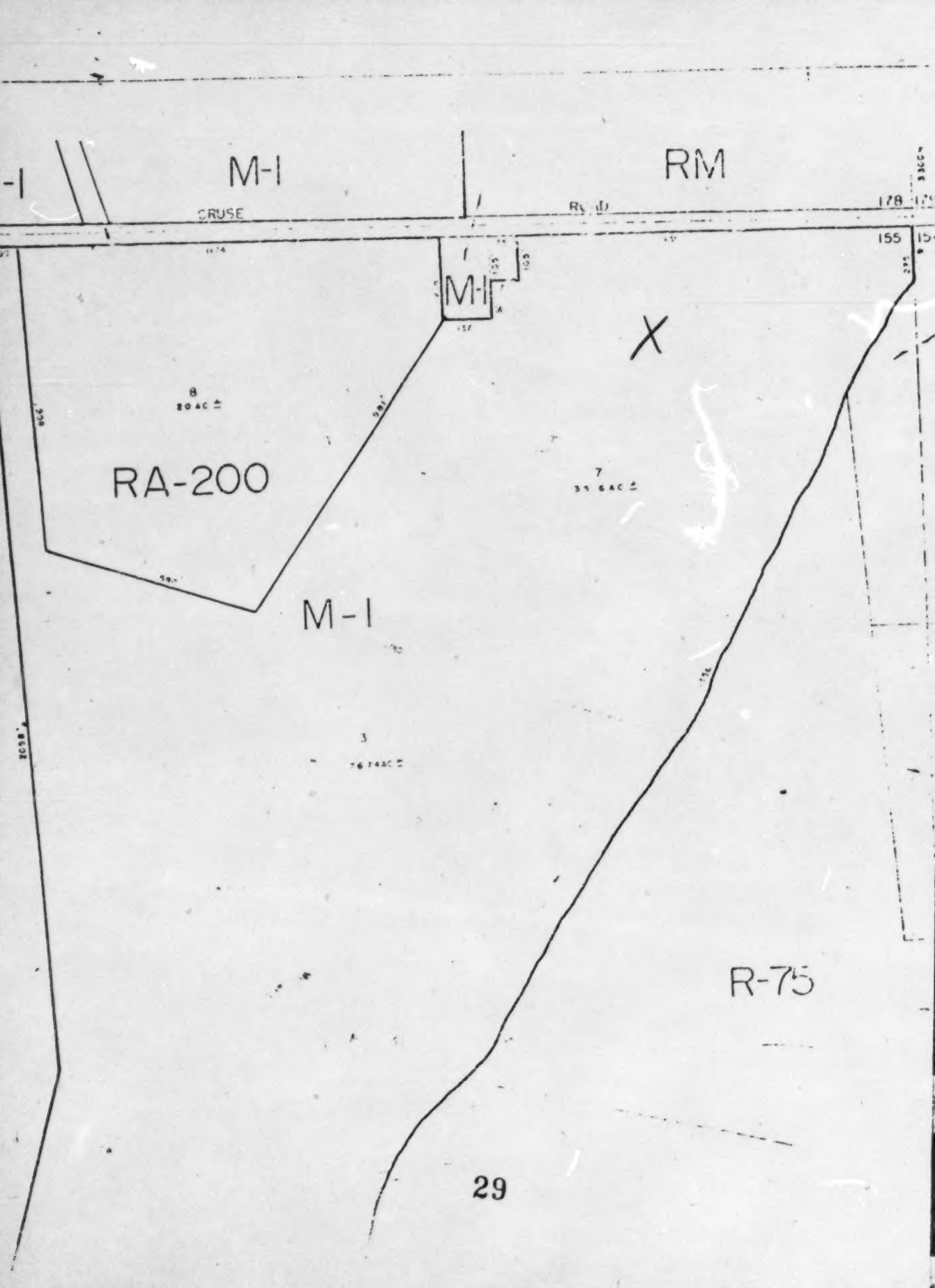
Day 18

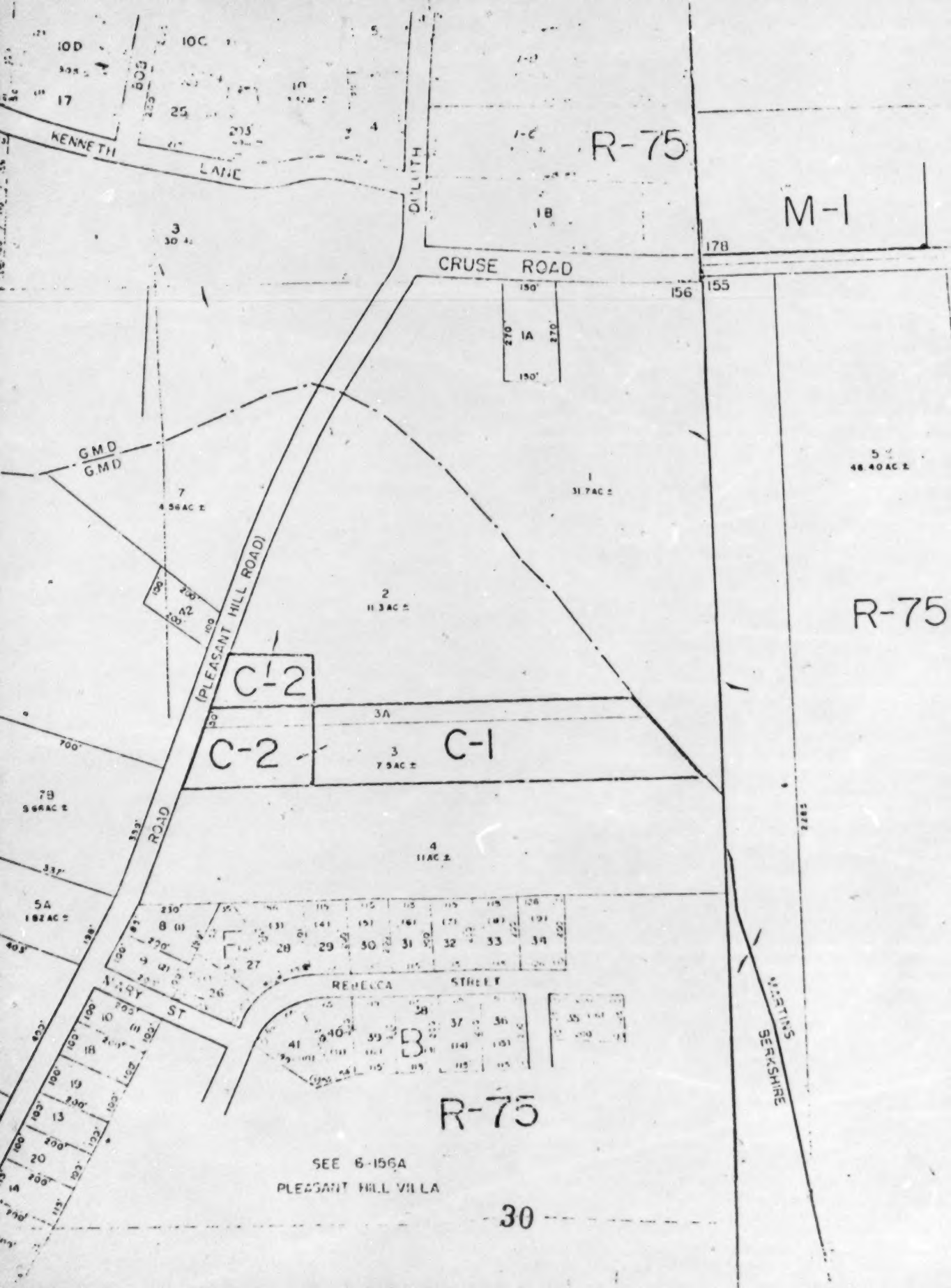
A. The public hearing (Stage III) is held by the Zoning Board. The chairperson should try to limit speakers to 5 minutes so that all groups can present their views.
B. At least 15 minutes before the period is over public comments should be halted to allow the Zoning Board to vote its decision.
C. If time allows, lead your students in reviewing the simulation estimating the impact of the decision on the community -- socially, economically and ecologically. Also, on a subsequent day students should evaluate how closely the simulation approximates reality in Gwinnett County.

Major Factors in Land Use Planning

Environmental Factor	Data Needed
Aesthetics	Physical appearance from all accessible angles at ground level (especially from highways, residences, etc.)
Animal life	Type and abundance of most common species Environmental requirements of most common species
Current use	Type of uses within last 5 years (especially old landfill, pond or bog)
Flooding	Flood hazard based upon severest flood expected in 10, 25, 50, or 100 years Presence in known flood plain
Population density	Density of human population expected to be affected by use
Resources	Availability of and accessibility to resources needed by specific use (especially sand, gravel, power, water)
Slope	Percent slope and topography Topography of adjacent area
Soil properties	Type and texture of horizons Depth of various horizons Bearing capacity Slippage Shrink-swell potential Erodibility Water absorption or drainage (permeability)
Surface water	Presence and sizes of streams, ponds or lakes, marshes or bogs
Bedrock	Type and distance below surface
Water table	Average depth Seasonal fluctuations

As the preceding data table shows, a series of studies are required to complete the total picture of the particular tract of land in question. Most municipal and county planners, developers, potential homeowners, and construction engineers are not prepared for the collection of such extensive information directly from the environment. They depend, instead, upon specialists in hydrology (science of water), geology, topography (study of land forms), and other fields to do the actual leg work. A soil survey book, such as the one compiled for Gwinnett County, often contains all of the abiotic data needed for any tract of land within the survey area. Also included is such a book are detailed descriptions of soil types, limitations to their use, and a detailed map of soil types and slopes.


M-1
RM
CRUSE
M-1
X
RA-200
M-1
R-75
155


10D
10C
KENNETH LANE
DILLITH
R-75
M-1
CRUSE ROAD
178
156
155
GMD
GMD
(PLEASANT HILL ROAD)
C-2
C-1
C-2
R-75
ROAD
REBECCA STREET
MARY ST
MARTINS BERKSHIRE
R-75
SEE 6-156A
PLEASANT HILL VILLA
30

ZONE OF CONTENTION -- A SIMULATION GAME

The Case

On Cruse Road just about two miles from Berkmar High School there is a 35.6 acre plot of undeveloped land located next to the land on which the new high school is being built. (See large map on wall)

The joint owners of this land, Howard and Altman, wish to lease it to the Sanoclean Landfill Corporation of Gainesville. Presently the land is zoned M-1 or light industrial zone. The owners have applied to the Zoning Board of Appeals for a "special exception" zoning which would allow them to have the land used as a sanitary landfill.

Following the application for special exception zoning, a sign was posted on the property announcing the application and the fact that a public hearing would be held in two weeks. The application was also advertised in the Gwinnett Home Weekly. The hearing will be held tomorrow before the Zoning Board of Appeals.

A number of residents of the Cruse Road-Pleasant Hill area who are aware of the proposed zoning change have organized to oppose the change. School board members are concerned about the landfill's location near the new high school. Some local citizens are concerned about the general effects on the water and soil in the surrounding drainage area.

On the other hand, county leaders concerned about the waste disposal problems in the area are interested in having another landfill to receive the trash and garbage of this populated section of the county.

The owners contend that the Sanoclean Corporation will run a completely sanitary landfill and that its operation will not in any way jeopardize the beauty and healthful environment of the Cruse Road neighborhood. They claim that the landfill will effectively serve the highly populated area north of Cruse Road and will therefore be a benefit to the community.

Many arguments, pro and con, have emerged, and a large turnout at the public hearing in the county courthouse is expected.

The Simulation

"Zone of Contention" is designed for 6 class periods. It takes place in three sequential stages. There is a short initial meeting of the Zoning Board of Appeals followed by a period during which special-interest groups meet to study the situation. The final stage consists of a second meeting of the Zoning Board of Appeals. Most of the debate over the issue takes place during this third stage. Finally, the Zoning Board makes its decision.

Each member of the class has a card describing the role he or she is to play during the game. This card will give you information about occupation and interests as well as a statement concerning your opinions. You should make every effort to stay "in character" throughout the play, responding to events and the other characters in the way your character would most likely respond. You should, however, listen carefully to arguments presented by both sides in the controversy. READ YOUR ROLE CARD CAREFULLY.

Each person will be a member of an interest group. There are three interest groups which will meet and gather information in preparation for the final hearing. When you read over your role card you will see that your interest group is listed at the bottom.

Some of the questions that should be considered in each group are:

1. Do we want or need another landfill in Gwinnett County?
2. Do we want the landfill located at this site?
3. Is this site appropriate for use as a sanitary landfill?
4. What would be the consequences -- both environmentally and economically -- of locating a landfill on this property?

Consider each of the questions from the viewpoints of the role which you are playing. Then review the full list of characters involved to get an idea of other people's interests.

The three stages of the simulation are described below:

Stage I

A. Zoning Board of Appeals Chairman calls the meeting to order and gives a brief statement describing the reason for the hearing.

B. The land-owners and representative of the landfill corporation then make initial statements.

C. Two home-owners may present counter arguments.

D. The Chairman of The Zoning Board suggests that the crowd of participants take time to study the situation in depth.

Stage II

Special interest groups meet to research the situation in more depth and to prepare arguments for the final hearing. The following chart indicates the groups that meet together and gives some suggestions to guide discussions. You do not have to limit yourselves to the suggestions given nor do you have to reach any kind of agreement as a group. The purpose of this stage is to allow everyone to become familiar with the situation and to "get into character."

Group I: County Officials

Bell	Merritt
Blake	Miller
Fountain	Morgan
Harper	Phillips
Hayes	Stanley
Livingston	Widener

Group II: Pro-landfill

Altman	Janecki
Calhoun	Sanders
Howard	Wiley

Group III: Con

Allen	Metcalf
Bernstein	Michaels
Burton	Monroe
Caproni	Morrison
Evans	Victor

Stage III

The Zoning Board reconvenes. Board members may ask questions or call for expert opinions from anyone in the audience. Any citizen may also raise questions or express an opinion before the Board. Remember to "stay in character." After the hearing, the Zoning Board of Appeals will vote and report the decision to the group.

Review Quiz for Part I

____ 1. Which of the following statements best sums up the problems described in the 1986 news articles?
   A. "There is too much crime and there are not enough county police to take care of it!"
   B. "I think taxes are just too high. Even though my taxes pay for water service and garbage pick-up the services aren't good!"
   C. "Too many people are burning trash in their yards, and it is causing foul smelling smoke clouds!"
   D. "We've got too much garbage on our hands, too much bad air and too many people with too many cars."

____ 2. Most environmental problems are man-made because of
   A. Man's past awareness of the limits of natural resources and the subsequent environmental damage he brought on by trying to regulate those resources.
   B. Man's failure to see the relationship among living and non-living components in a natural system.
   C. Man's drive for material things which causes him to overlook the rights of other people.
   D. Man's education which stressed scientific understanding of only abiotic phenomena.

____ 3. An ecosystem is best described as
   A. a unit of interacting living things and physical surroundings.
   B. specific physical features isolated from other elements.
   C. a special way of studying the patterns of population growth.
   D. a natural system comprised of plants and animals.

____ 4. Which of the following sequences is most like food chains found in ecosystems?
   A. herbivores decomposers plants carnivores
   B. plants decomposers herbivores carnivores
   C. carnivores plants herbivores decomposers
   D. plants herbivores carnivores decomposers

____ 5. To schieve <u>consensus</u> means that
   A. members of a group have terminated their discussion
   B. All people in a group think exactly alike about an issue
   C. There is a common problem which everyone in a group hopes to solve
   D. Members of a group have come to some agreement

____ 6. Place an "a" before those elements which are <u>abiotic</u> and a "b" before those which are <u>biotic</u>.
   _____ pine trees
   _____ sandy soil
   _____ granite
   _____ oxygen
   _____ bacteria
   _____ rabbit
   _____ you

Review Quiz for Part II

_____ 1. Which of the following has been least affected by the growth of Gwinnett County's population?
- A. transportation
- B. the schools
- C. garbage and other waste
- D. the form of government

_____ 2. Population growth in Gwinnett County is best explained in terms of
- A. the location of interstate highway 85
- B. the availability of water supply
- C. the zoning regulations
- D. proximity and access to Atlanta

_____ 3. The major factorin Gwinnett's population growth is
- A. birth
- B. death
- C. migration
- D. density

_____ 4. Which of the following best describes Gwinnett County's growth?
- A. slow and steady since the World War II
- B. rapid and nearly unplanned since 1960
- C. carefully controlled since 1969
- D. more spectacular in the 1920s than in the 1970s

_____ 5. A Megalopolis results from
- A. industrialization of farmlands
- B. planned growth and zoning regulations
- C. urban-suburban sprawl
- D. merging of two ecosystems

_____ 6. Compared to the population growth rates of the world and the U.S. the growth rate of Gwinnett County is
- A. about the same as that of the U.S.
- B. greater than either the U.S. growth rate or world growth rate
- C. faster than the U.S. rate but not so fast growing as the world
- D. slower than either the U.S. or the world growth rates

_____ 7. The several viewpoints on growth contained in statements quoting several county leaders are best summarized as follows:
- A. We will continue to grow but we will guide our growth to assure a diversity of residential, industrial and commercial development.
- B. We must halt growth until we have installed an adequate sewage system for a large population.
- C. We will continue to grow, but our growth must be limited to residential population and additional industry should be unwelcome.

____ 8. Which of the following most likely would cause concerned citizens to be in conflict over which particular environmental action to take?

A. They do not have the same basic needs for survival.
B. They hold different values and views on the quality of life
C. They prefer individual rather than common action
D. They are usually concerned about equilibrium in the ecosystem

____ 9. Which tract showed the greatest increase in numbers of people in the period between 1970 and 1974?

____ 10. Which tract showed the greatest percentage increase in population between 1970 and 1974?

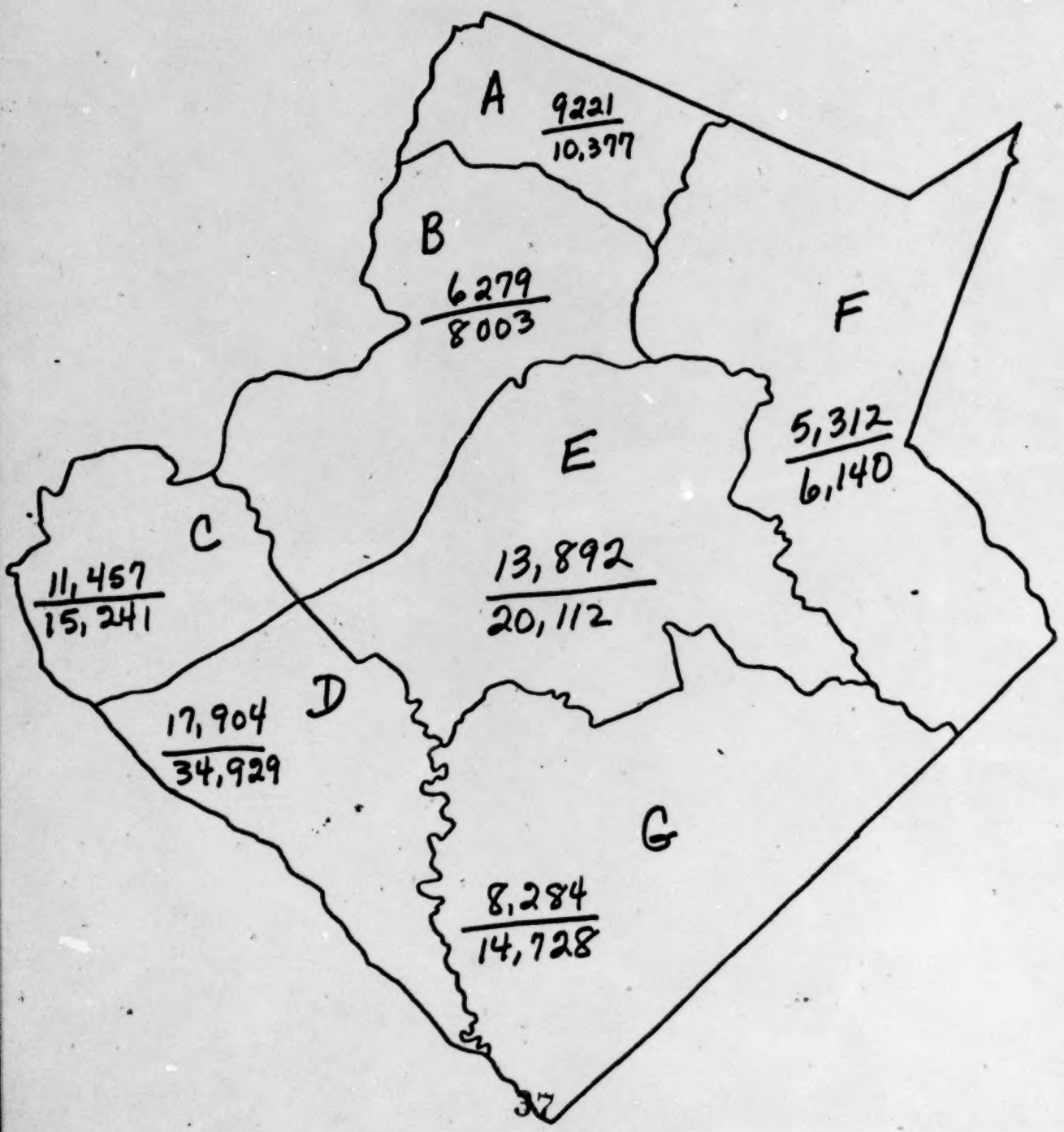
____ 11. Which tract should have a growth rate most similar to your school's population growth?

____ 12. Rapid increases in the population in Snellville influenced growth in which tract?

____ 13. Lawrenceville accounts for much of the population in which tract?

GWINNETT COUNTY POPULATION FIGURES -- BY CENSUS TRACTS

1970 figure
1974 figure



Review Quiz for Part III

_____ 1. One reason why so much dumping occurs along Gwinnett's roadsides is that:
   A. some people won't pay fees for collection or landfill disposal
   B. county police refuse to arrest or fine dumpers
   C. dumping has been encouraged as a means of recycling by the Board of Commissioners
   D. there is no Georgia state law against dumping

_____ 2. One of the factors contributing to Gwinnett's solid waste problems is that:
   A. There are too many private landfills competing for garbage and trash disposal business
   B. People in Gwinnett County produce much more waste than average Americans
   C. Incineration is the main method of disposal and a much larger incineration facility is needed
   D. The county has no public landfill where local residents may bring their garbage and dump it free of charge.

_____ 3. Which of the following waste disposal programs would probably cost the most in tax funding?
   A. government funded door-to-door collection of garbage
   B. government placement of numerous strategically-placed dumpsters throughout the county
   C. privately-operated landfills franchised by the government
   D. composting of garbage at neighborhood plants and collection of trash by private collection companies

_____ 4. Which of the following is <u>not</u> one of the disadvantages of composting?
   A. households would be required to separate organic garbage from other trash
   B. rats and insects are usually found in compost facilities which are therefore unhealthy
   C. most solid waste cannot be recycled or reprocessed
   D. the soil conditioner which is produced from the process is not actually a fertilizer

_____ 5. The following county officials have major responsibilities for <u>determining</u> Gwinnett County's environmental policy
   A. The Sheriff and the County police
   B. The Tax Commissioner and the Water Department
   C. The Coroner and the Probate Judge
   D. The Board of Commissioners and the Planning Commission

____ 6. A sanitary landfill operation must
A. Be sprayed weekly with disinfectant to kill bacteria.
B. Bury all refuse with a layer of earth.
C. Use only the trench method of digging up the soil.
D. Be located on rocky soil which is porous.

____ 7. Which of the following is an example of the kind of unnecessary packaging which has greatly increased solid waste pick-up and disposal problems?
A. metal tubes for toothpaste
B. glass jars for mayonnaise
C. plastic film and trays for fresh potatoes
D. paper wrapper for candy

____ 8. In sanitary landfills the garbage is recycled by
A. rats
B. bacteria
C. flies
D. pesticides

____ 9. Gwinnett County's solid waste disposal program:
A. Serves as an effective model for other metro-area counties
B. Closely follows the guidelines set down by the Georgia Solid Waste Management Act of 1972
C. Is still not efficient and will require further governmental and citizen action
D. Is now being studied by the Task Force on Land Use and Urban Growth.

____ 10. The people most likely to be strong opponents of land-use planning are
A. land speculators whose immediate profits would suffer from land use restrictions
B. citizens organizations dedicated to protecting their residential property values
C. conservationists who prefer that some lands remain undeveloped
D. federal agricultural officials who are mainly concerned with soil and crops

____ 11. Which of the following methods of disposing of solid wastes has a potential for the production of energy
A. Sanitary landfills
B. Incineration
C. Composting
D. Dumping

Review Quiz for Part IV

_____ 1. A decision on a request for rezoning a piece of land in Gwinnett County:
- A. requires a public hearing before the Board of Appeals makes a final decision
- B. requires a public hearing only if a landfill is proposed
- C. is heard by the Board of Zoning Appeals in closed private meeting
- D. is not referred to the state government in compliance with 1975 law

_____ 2. An example of a land use policy which plans or designs with nature is
- A. Filling in floodplain areas with solid wastes and dirt before any construction is allowed
- B. Restricting parkland and open spaces to less populous counties
- C. Breaking up marshes, dunes and other unusual ecosystems
- D. Legislating to protect farmlands which are high producers of grains, vegetables and other food supplies

_____ 3. Many environmental problems arose in Gwinnett County as a result of rapid growth and construction. Which of the following could have prevented much environmental damage?
- A. Repeal of the 1972 Solid Waste Management Act of Georgia
- B. A county policy of building only a flat land and not on slopes
- C. Earlier enactment of The Zoning Resolution of Gwinnett County
- D. Removal of planning powers from the Atlanta Regional Commission

_____ 4. Which of the following zoning districts is appropriate for a large apartment building?
- A. HS
- B. M2
- C. RM
- D. R100

_____ 5. An example of land use which best meets recommendations of the Task Force on Land Use and Urban Growth is:
- A. The designation of public open spaces in a cluster of homes.
- B. Permitting the construction of a gas station in a zoned residential area.
- C. Appropriation of public property for an expressway
- D. Utilizing all available land for construction so as not to waste space.

_____ 6. A land area which is subject to periodic flooding and on which there should be no building construction is zoned
   A. RA200
   B. RL
   C. RH
   D. MH

_____ 7. The Atlanta Regional Commission is an example of
   A. A federal regulatory agency which oversees environmental protection.
   B. A large municipal department which regulates land use.
   C. An area planning organization which promotes joint solution of the problems of cities and counties.
   D. A Gwinnett County agency which draws up zoning ordinances which regulate land use.

Ques 9-13. The map on the next page shows population figures for each of the U.S. Census Tracts of Gwinnett County. These "tracts" are sections of the county divided for purposes of collecting census information.

The figure above the line is the 1970 population of that tract. The figure below the line is the 1974 population.

Write A, B, C, D, E, F, G for answer.

R-75

M-1

KENNETH LANE

CRUSE ROAD

GMD

GMD

PLEASANT HILL ROAD

C-2

C-1

ROAD

MARY ST

REBECCA STREET

MARTIN'S BERKSHIRE

R-75

SEE 6-156A

PLEASANT HILL VILLA

42

M-1

M-1

RM

CRUSE

Proposed Landfill Site

RA-200

M-1

R-75

43

Review Quiz Answers

Part I

1. D
2. B
3. A
4. D
5. D
6. B
   A
   A
   A
   B
   B
   B

Part II

1. D
2. D
3. C
4. B
5. C
6. B
7. A
8. B
9. D
10. D
11. (fill in tract letter when your school is located)
12. G
13. E

Part III

1. A
2. D
3. D
4. B
5. D
6. B
7. C
8. B
9. C
10. A
11. B

Part IV

1. A
2. D
3. C
4. C
5. A
6. C
7. C

Role Cards for "Zone of Contention"
(cut and paste on 4x6 cards)

Blake - Member of Zoning Board of Appeals

You are a member of the Zoning Board of Appeals. You were appointed by the County Commissioners to serve on this important board which considers all request for rezoning or"special exception" zoning in public hearings. In this special exception hearing, your Board's decision is final.

You were a farmer for a number of years, and then five years ago you sold your farm to go into the farm machinery and large equipment business. Generally you are concerned about the neglect of the soil and consider the county to have "overdeveloped" into residential sub-divisions and industries. On the other hand the sale of bulldozers and other large equipment used in development can boost your business which had been in a decline in the current recession year.

Morgan - Member of Zoning Board of Appeals

You are a member of the Zoning Board of Appeals. You were appointed by the County Commissioners to serve on this important board which considers all request for rezoning or "special exception" zoning in public hearings. In this special exception hearing, your Board's decision is final.

You are a lawyer in a family law firm. You are known throughout the county as a leader in environmental causes. You are a member of the National Wildlife Federation and the Sierra Club and are active in the Georgia Conservancy. You are an outspoken advocate of strong enforcement of the ordinance against dumping.

Phillips - Member of Zoning Board of Appeals

You are a member of the Zoning Board of Appeals. You were appointed by the County Commissioners to serve on this important board which considers all request for rezoning or "special exception" zoning in public hearings. In this special exception hearing, your Board's decision is final.

You are an established building contractor who has built many of the larger industrial buildings and business offices in the county in the last ten years. You openly encourage more development for its general economic benefits to the county. You feel that an expansion of industrial and business growth will create more jobs and more income for the county.

Harper - Member of Zoning Board of Appeals

You are a member of the Zoning Board of Appeals. You were appointed by the County Commissioners to serve on this important board which considers all request for rezoning or "special exception" zoning in public hearings. In this special exception hearing, your Board's decision is final.

You are the head of a family plumbing firm. Nearly forty years ago your grandfather started the plumbing business in the county and your family has resided in Gwinnett ever since. You are convinced that growth has brought great progress to the county. Currently you are concerned about the problems of garbage and trash disposal. Disposing of discarded plumbing fixtures, old pipes and such junk has been inconvenient and rather costly since the nearest landfill is privately run and 23 miles from your business.

Miller - Member of Zoning Board of Appeals

You are a member of the Zoning Board of Appeals. You were appointed by the County Commissioners to serve on this important board which considers all request for rezoning or "special exception" zoning in public hearings. In this special exception hearing, your Board's decision is final.

You own a large department store in a large shopping center in the county. Generally you are in favor of rezoning land in and near residential areas to provide the convenience of business or institutional development close to each large subdivision. Recently you have been quite concerned about the inadequacy of garbage and trash collection in the shopping center. You have complained to the Board of Commissioners that the garbage collectors franchised by the county tend to skip the dumpsters in the shopping center on some collection days. You have been encouraging the commissioners to consider some new system of collection.

Fountain - Chairman of Board of Commissioners

You are now serving in your final year as Commission Chairman, a full-time elected position for which you plan to run again. It is, therefore, very important for you to be familiar with the likes and dislikes of the voters. You believe that growth means progress and have encouraged expansion of the business and industry community in the county.

You are joint-owner in a successful heating and air-conditioning firm, now run by your partner. You and your family will not be personally affected by a new landfill, since you live in Lawrenceville. However, you do often hear complaints from Gwinnett Countians about the current sanitation system.

Merritt - County Health Official

You have held your position as Health Inspector for nearly twenty years. You plan to retire in two more years. You are very outspoken in your opinion that Gwinnett started going "downhill" in the 1960's and the descent has been growing more rapid during every year since. You have kept yourself knowledgeable about improvements in public health through the years and are a conscientious citizen in your own way. Having had a considerable amount of experience with the actual operation of landfills, you are concerned with the possible health hazards that could result from locating a landfill so near a highly-populated area.

Bell - Administrative Assistant

You are the newly appointed administrative assistant to the Board of County Commissioners. You have had special training in public administration and five years experience in administration in another Georgia county.

Your job is to take care of the day-to-day tasks of running the county government. The commissioners depend on you to get the facts on any issue that arises and help provide them with details on various county government operations. Because recent press coverage has highlighted the problem of dumping in the county, the Chairman of the Board of Commissioners has asked you to look into the county's waste disposal program and present your evaluation of it.

Altman - Land Owner

You and your business associate, Howard, purchased the Cruse Road property eight years ago when this area was almost completely undeveloped. You thought the land might be a good investment. The land was not considered good land for residential development, but it was relatively inexpensive and located in a section of the county that was obviously increasing in population.

You were contacted by the Sanoclean Corporation last year and offered a good annual income from leasing the land to run a landfill on it. Last month you and Howard met with corporation officials to work out an agreement. Now obtaining permission from the county Zoning Board is an important step in completing the agreement.

You and Howard have invested in other land in Gwinnett and Rockdale Counties. You live in Gwinnett and run a wholesale paper supplies company in Norcross.

Howard - Land Owner

You and your business associate, Altman, purchased the land on Cruse Road eight years ago for an investment. Because you live in Atlanta, Altman has overseen land investments in Gwinnett.

You had previously encouraged Altman to put the land up for sale, but when he called you last month about the Sanoclean leasing deal, you considered that this land might improve in value in the long run. You are convinced that developing the property as a landfill will improve its surface features and eventually after it is all filled in it will be more valuable.

Bernstein - Apartment Owner

You own the apartment complex across the road from the proposed landfill site. You recognize the fact that a landfill is needed in the area near Cruse Road, but object to its location so near to your complex. You fear that property will be devalued and that the area might be less desirable to potential tenants. You attempted and failed to purchase the property in question last year, planning to put up a new apartment complex there.

Burton - Environmental Protection Division Representative

You live in a subdivision north of the Cruse Road area. You work with the Environmental Protection Division of the Department of Agriculture in Atlanta. You have been asked to appear before the board in the interest of a group of citizens who are concerned by the ever-increasing development in the Cruse Road area. You hold a Ph.D. degree in Environmental Science from the University of California at Berkeley and did your undergraduate work in Zoology at the University of Georgia.

Monroe - Farmer, Member of Board of Commissioners

You are 52 years old and have lived in Gwinnett County all your life. You have three married daughters and four grandchildren, all of whom live in the county. You own a moderate-sized farm near Snellville, which is operated by one of your sons-in-law. You consider yourself semi-retired, but serve as a member of the Board of Commissioners because you are actively concerned about the county.

You have witnessed the local population explosion and feel that Gwinnett does not need any more people or industry. You have been distressed by the acres and acres of fertile farmland and forest that have been destroyed for development in the name of progress. For this reason, you are intensely interested in any land use decisions.

Evans - Western Electric Plant manager, Member Board of Commissioners

You moved to Gwinnett County from Ohio only five years ago to become plant manager at Western Electric. You are rather young to hold such a position; however, you are highly intelligent and ambitious person. You became actively involved in the community almost immediately upon your arrival, bringing to your civic activities the same enthusiasm and vitality that you show on the job. You are presently a member of the Board of Commissioners and plan to run against Fountain in the upcoming race for Commission Chairman.

You are for adopting a "no-growth" policy in Gwinnett County and feel that the county should provide sanitation service for the citizens.

Livingston - Agent of Resource Conservation and Development Service

You are 28 years old and a recent addition to the staff of the Gwinnett County Resource Conservation and Development Service, a division of the U.S. Soil Conservation Service. You received a master's degree in Agronomy from North Carolina State University with emphasis on soil conservation. You worked for three years as an assistant conservationist in Raleigh before being transferred to Gwinnett. You consider that it is part of your job to be interested in any actions taken in the county which could have negative environmental effects.

Stanley: State Soil Conservationist

You are a State Soil Conservationist for Georgia, with an office in Athens. You have been asked by Livingston to study the situation in question, since you have more experience in the area. You have lived in the North Georgia area for nearly all of your life and are familiar with its environmental peculiarities.

Hayes - Professional Planner

You are a professional planner who works for the Planning and Zoning Division of the county government. You are a trained and experienced community planner who left a city planning job to take the job in Gwinnett in 1970 when the major land use plan for the county was developed.

You are generally opposed to mixing residential, commercial and institutional zoning in patchwork patterns and strive to encourage the development of protected strips which protect property values and economic and social development.

Widener - Professional Planner

You are a professional planner who works for the Planning and Zoning Division of the county government. You joined the Gwinnett planning staff after completion of training at a large southeastern university two years ago.

Generally you favor cluster zoning in the areas not yet developed. Also you encourage the commissioners to consider setting aside more park area and open land as the county develops. You are currently involved in preparing a report for the county administrator summarizing solid waste disposal problems in the county and suggesting possible alternatives for county action.

Metcalf - ARC Representative

You are a member of the professional staff of the Atlanta Regional Commission. Trained as a geologist, you were hired on the ARC staff two years ago to aid in the preparation of information summaries and maps of the land characteristics of the metro region. You recently completed studies of drainage, rock and soil characteristics of the area.

Organized homeowners who want to block the proposed landfill location have called you to come to the hearing and testify about the potential negative impact the landfill will have on the area.

Morrison - School Board President

You are the current president of the county Board of Education. Recently while checking over progress on the construction of the new high school on Cruse Road you noticed the sign on the adjacent property advertising the hearing for special exception zoning. You are very concerned that the proposed development of that land is for a landfill. Although this proximity of a landfill will have its advantages for easy waste disposal by the nearby high schools, you are concerned about the traffic hazards and the possibility that the landfill will not be properly operated so as to keep the area sanitary and healthy. Many school board members have objected to the location of the landfill in this school zone, and you plan to attend the hearing to listen and offer some remarks.

Michaels: Home Owner

You are a private home owner in a subdivision located near the proposed landfill off Cruse Road. You have organized other home owners to fight against the special exception request. You fear that garbage trucks and commercial trucks driving in and out of the landfill will cause a real traffic hazard for both children and adults. Also, you are concerned that trash and garbage from these vehicles may be blown off or drop off onto the surrounding property of the area making the whole neighborhood unsightly.

Caproni - Home Owner

You are a new home owner who lives on Pleasant Hill Road not far from the intersection with Cruse Road. You are greatly concerned about the effect the landfill may have on the value of your property and that of your neighbors. You have joined with Michaels in organizing local residents to fight against the location of a landfill in the area. You plan to attend the hearing to speak against the landfill.

Janecki - Representative of Sanoclean Landfill Corporation

You are 55 years old, married with two adult sons. You have held a variety of occupations in your life, but worked as a truck driver for 15 years. Through a combination of thrift and wise investments, you were able to form Sanoclean in 1968. You currently operate four landfills in surrounding counties. You personally hire and train your operators. The Cruse Road property with its gullies and pits appears to be a good location for another fill.

Calhoun - Attorney for Land-owners

You are an Atlanta lawyer hired to handle this case for the land-owner who wishes to have his property developed as a commercial landfill. You have looked into legal aspects of this case and found that the zoning regulations of the county allow a proposal for landfill to be considered in any type of zoning except flood hazard zoning. You have advised your client to go before the Zoning Board of Appeals and request special exception zoning of his M-1 zoned land.

You plan to attend the hearing to argue that this procedure is entirely acceptable under the law. You also hope to convince any objectors that the commercial landfill will be a sanitary operation run according to state legal standards.

Wiley - Construction Engineer

You are 23 years old and have recently received a degree in Construction Engineering from Georgia Tech. You were a senior at Berkmar during the first year of its operation and feel loyalty to the school. You fear that the locality might be degraded by the location of a landfill there.

Your apartment faces Cruse Road and directly overlooks the proposed site. You are concerned about the possibility of foul odors, loud noises, and destruction of the beauty of your view. You have however, explored the site and feel that it would probably not be useful for any other kind of development. It is also possible that, when the landfill is completed, the condition of the land will be improved. You want to know more about the situation before formulating an opinion.

Sanders - Realtor

You are a realtor, whose financial success is more or less dependent upon population growth and property values. You moved to Gwinnett twelve years ago from Atlanta, having foreseen the suburban migration as an inevitable result of ever-increasing crowding in Georgia's capital.

You believe that the proposed landfill would have little effect on property values if operated properly. Sanoclean plans to leave a stand of trees adjacent to the road, shielding the operation from view. Daily covering of the trash should effectively prevent foul odors.

You believe that most home owners will be glad to have a landfill so conveniently located.

Victor - Apartment Dweller

You are 32 years old, married, with twin 8-year-old sons. You are an accountant for a local business firm and have lived in Gwinnett for six years. You represent a group of concerned residents from the apartment complex across the road from the proposed site. You and your neighbors are concerned about the potential dangers that might exist for curious kids who habitually play together in that currently vacant lot. You also feel that development has already destroyed too much of the scenic natural areas of Georgia.

Allen - Insurance Salesperson, Member Board of Commissioners

You are 37 years old and parent of a 9-year-old son and a 13-year-old daughter. You own a $40,000 home near the site under consideration. It is very likely that your daughter will attend the new school when it is built. You sell all types of insurance, but have done very well in recent years by concentrating your efforts in the area of property insurance. You are, of course, interested and concerned about the effects that a landfill would have on property values, especially since your company insures the apartment complex just across the road from the proposed site.